

International Journal of Man-Machine Studies

Volume 23, 1985

Executive Editors

B. R. Gaines and D. R. Hill

Editorial Board

J. H. Andreae	M. J. Coombs	T. P. Moran	J. C. Thomas
M. A. Arbib	B. Curtis	G. Pask	A. I. Wasserman
P. Barnard	J. D. Foley	E. L. Rissland	R. C. Williges
L. Bolc	T. R. G. Green	B. Shackel	I. Witten
R. Brooks	W. Jassem	M. L. G. Shaw	P. I. Zorkoczy
J. S. Brown	G. J. Klir	B. Shneiderman	
J. M. Carroll	E. H. Mamdani	E. Soloway	



Academic Press

(Harcourt Brace Jovanovich, Publishers)

London Orlando San Diego New York
Toronto Montreal Sydney Tokyo

ISSN 0020-7373

Contents of Volume 23

NUMBER 1, JULY 1985

Heines, J. M. and O'Shea, T. The design of a rule-based CAI tutorial	1
Yager, R. R. Inference in a multivalued logic system	27
Brooks, C. P. and Newell, A. F. Computer transcription of a handwritten shorthand as an aid for the deaf—a feasibility study	45
Beaumont, J. G. Speed of response using keyboard and screen-based micro-computer response media	61
Sleeman, D. UMFE: a user modelling front-end subsystem	71
Cliffe, M. J. Microcomputer implementation of an idiographic psychological instrument	89

NUMBER 2, AUGUST 1985

Lowe, D. G. Co-operative structuring of information: the representation of reasoning and debate	97
Chaudhary, B. D. and Sahasrabuddhe, H. V. A study in dimensions of psychological complexity of programs	113
Elkertson, J. and Williges, R. C. A performance profile methodology for implementing assistance and instruction in computer-based tasks	135
Barker, P. G. and Najah, M. Implementing pictorial interfaces using a high resolution digitizer	153
Doignon, J-P and Falmagne, J-Cl. Spaces for the assessment of knowledge	175
Sanders, R. L. Computer-administered individualized psychological testing: a feasibility study	197
Calls for papers	Inside back cover

NUMBER 3, SEPTEMBER 1985

Isa, B. S., Evey, R. J., McVey, B. W. and Neal, A. S. An empirical comparison of two metalanguages	215
Newsted, P. R. Paper versus online presentations of subjective questionnaires	231
Ray, H. N. A study of the effect of different data models on casual user's performance in writing database queries	249
Umphress, D. and Williams, G. Identity verification through keyboard characteristics	263
Baron, R. J. Visual memories and mental images	275
Julstrom, B. A. and Baron, R. J. A model of mental imagery	313
Calls for papers	Inside back cover

NUMBER 4, OCTOBER 1985

Bolc, L., Kowalski, A., Kozłowska, M. and Strzalkowski, T. A natural language information retrieval system with extensions towards fuzzy reasoning	335
Fulton, M. A. A research model for studying the gender/power aspects of human-computer communication	369
Wiedenbeck, S. Novice/expert differences in programming skills	383
Lindquist, T. E., Fainter, R. G. and Hakkinen, M. T. GENIE: a modifiable computer-based task for experiments in human-computer interaction	391
Sakawa, M. and Yano, H. Interactive fuzzy decision-making for multi-objective non-linear programming using reference membership intervals	407
Barker, P. G. and Najah, M. Pictorial interfaces to data bases	423

NUMBER 5, NOVEMBER 1985

Pulat, B. M. and Grice, A. E. Computer aided techniques for crew station design: Work-space Organizer—WORG; Workstation Layout Generator—WOLAG	443
Vessey, I. Expertise in debugging computer programs: a process analysis	459
Boose, J. H. A knowledge acquisition program for expert systems based on personal construct psychology	495
Weiner, E. J. Solving the containment problem for figurative language	527
Yager, R. R. Explanatory models in expert systems	539
Munakata, T. Knowledge-based systems for genetics	551
Stevens, R. F. An on-line version of the personal relations index psychological test	563

NUMBER 6, DECEMBER 1985

Findler, N. V., Bickmore, T. W. and Crompt, R. F. A general-purpose man-machine environment with special reference to air traffic control	587
Greenstein, J. S. and Lam, S-T. An experimental study of dialogue-based communication for dynamic human-computer task allocation	605
Witten, I. H. Elements of computer typography	623
Parkinson, S. R., Sisson, N. and Snowberry, K. Organization of broad computer menu displays	689
Schvaneveldt, R. W., Durso, F. T., Goldsmith, T. E., Breen, T. J., Cooke, N. M., Tucker, R. G. and De Maio, J. C. Measuring the structure of expertise	699
Zissos, A. Y. and Witten, I. H. User modelling for a computer coach: a case study	729
Calls for papers	inside back cover

Copyright © 1985 by Academic Press Inc. (London) Ltd.

ALL RIGHTS RESERVED

No part of this volume may be reproduced in any form, by photostat, microfilm, or any other means, without written permission from the publishers.

Printed in Great Britain